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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/523,196

03/16/2005

Masaru Nonomura

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01/07/2009

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EXAMINER

ABOAGYE, MICHAEL

ART UNIT

PAPER NUMBER

1793

MAIL DATE

DELIVERY MODE

01/07/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/523,196	<b>Applicant(s)</b> NONOMURA ET AL.	
	<b>Examiner</b> MICHAEL ABOAGYE	<b>Art Unit</b> 1793	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 23 October 2008.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 51-53, 84 and 85 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 84 and 85 is/are rejected.
- 7) ☒ Claim(s) 51-53 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Claim Objections***

1. Claim 84 is objected to because of the following informalities:

In line 2 after "object" delete "to be".

In line 4 after "object" delete "to be".

In line after "object" delete "to be".

At the end of line 10, after "object" delete "to be heated".

In line 12, after "object" delete "to be heated".

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claim 84 is rejected under 35 U.S.C. 102(b) as being anticipated by Matsuo et al. (US Patent No. 5,003,160).

Regarding claim 84, Matsuo et al. discloses a method of thermal analysis for determining an appropriate heating condition for heating an object to be introduced into and heated in a heating furnace in accordance with a required temperature profile, wherein said method comprises: measuring a temperature at a measuring point of the

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object to be heated at each of a plurality of measuring locations of the heating furnace during a heating procedure for increasing the temperature of the object after introduction of the object into the heating furnace (column 2, lines 37-53, and column 4, lines 41-55; determining a heating characteristic at each of the measuring locations by using a heating temperature at the measuring location and the temperature measured at the measuring point of the object (column 7, lines 8-25), the measuring location being a location through which the object to be heated passes along a transferring direction in the heating furnace (Abstract and column 7, lines 8-25); and simulating a temperature profile of the object when a heating condition is changed by using the heating characteristic that is determined at each of the measuring locations. (Note, in column 7, lines 33-50 and claim 1; Matsuo teaches a simulated temperature profile obtained by a means that is interactive with a sensor means (30) to process the actual temperature and position data of the object. It can therefore be inferred that the simulation means in view of the sensors is responsive to changes in the heating conditions at a given location in the furnace (column 2, lines 37-53, and column 7, lines 32-45).

Regarding claim 85, Matsuo et al. compares the simulate profile and the actual temperature profile and makes judgment as to whether inconsistency exit between the two profiles or whether the two profiles coincide with each other. The examiner interprets this recitation to read on the limitations set forth in claim 85.

***Allowable Subject Matter***

4. Claims 51-53 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Response to Arguments***

5. The examiner acknowledges the applicants' amendment received by USPTO on October 23, 2008. Claims 51-53, 84 and 85 are currently under consideration in the application.

6. Applicant's arguments filed October 23, 2008 have been fully considered but they are not persuasive.

Applicant submit that Matsuo does not disclose or suggest at least the above-noted features recited in claim 84, because while Matsuo, in order to generate the simulated time-temperature profile, it is necessary that the physical characteristics of the object be manually inputted such that corresponding control data can be retrieved, with the simulation being performed using the retrieved control data. The examiner agrees. However claim 84 as set forth does not preclude manually inputting the physical characteristics of the object to be heated.

Applicant further assert that in contrast to Matsuo, claim 84 recites determining a heating characteristic at each of the measuring locations by using a heating temperature at the measuring location and the temperature measured at the measuring

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point of the object; and simulating a temperature profile of the object when a heating condition is changed by using the heating characteristic that is determined at each of the measuring locations. The contrast outlined above is noted however, the limitation relied upon by applicant does not clearly distinguish over Matsuo. Note, in column 7, lines 33-50 and claim 1; Matsuo teaches a simulated temperature profile obtained by a means that is interactive with a sensor means (30) to process the actual temperature and position data of the object. It can therefore be inferred that the simulation means in view of the sensors is responsive to changes in the heating conditions at a given location in the furnace (column 2, lines 37-53, and column 7, lines 32-45). Therefore the simulated profile of Matsuo would reflect any dynamic changes that would occur at a given location.

### ***Conclusion***

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

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extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHAEL ABOAGYE whose telephone number is (571)272-8165. The examiner can normally be reached on Mon - Fri 8:30am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jessica Ward can be reached on 571-272-1223. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Michael Aboagye/  
Assistant Examiner,  
Art Unit 1793

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/Jessica L. Ward/

Supervisory Patent Examiner, Art Unit 1793